Stefano Silvestri ssilvest@iupui.edu

402 N Blackford St
Indianapolis, IN 46202
(617) 840-2376

RESEARCH INTERESTS

Dynamical systems: complex dynamics, geometric group theory, ergodic theory, random walks.

EDUCATION

Ph.D. in Mathematics
Indiana University-Purdue University of Indianapolis, expected May 2018
Concentration: Dynamical Systems
Advisor: Rodrigo Pérez, Ph.D.

Master of Arts,
Boston University, January 2013
Concentration: Pure & Applied Mathematics

Bachelor of Arts, Cum Laude with Distinction
Boston University, January 2013
Concentration: Pure & Applied Mathematics
Sigma Alpha Lambda Honor Society

—, Budapest Semester in Mathematics
Budapest University of Technology and Economics, Fall 2011
Concentration: Mathematics

—,
University of Massachussetts Boston, class 2012
Concentration: Mathematics
Minor: Computer Science
Alpha Lambda Delta Honor Society

TEACHING EXPERIENCE

IUPUI Indianapolis, IN
Primary Instructor

- Multidimensional Mathematics: Spring 2016 (52 students)
- Calculus for Technology II: Fall 2015 (26 students)
- Calculus for Technology II: Summer 2015 (22 students)
- Calculus for Technology I: Spring 2015 (25 students)
- A Brief Survey of Calculus (Business Calc): Fall 2014 (95 students)

Teaching Assistant

- Analytic Geometry and Calculus I: Fall 2015 (26 students)
- Analytic Geometry and Calculus I: Spring 2015 (25 students)

RESEARCH EXPERIENCE

University of Houston, Houston, TX Summer 2015
Houston Summer School in Dynamical Systems.

Mathematical Sciences Research Institute, Berkeley, CA Summer 2012
Summer Graduate Workshop on Model Theory and Arithmetic Dynamics.

University of Minnesota, Twin Cities, Minneapolis, MN Summer 2012
Research Experience for Undergradaute on Dynamics of Pattern Formation.
Advisor: Arnd Scheel, Ph.D. & Matt Holzer, Ph.D.

Boston University, Boston, MA Jan 2011 - Aug 2013
Research in Complex Dynamical Systems conducted under the supervision of Robert L. Devaney, Ph.D. and in collaboration with the BU Dynamical System Group.
Advisor: Robert L. Devaney, Ph.D.

EMPLOYMENT

Mathematics Tutor at MATH HELP, Boston University. Fall 2012 - Spring 2013
(`http://math.bu.edu/people/dmm/FacRes/mathhelp.html`)
Reference: Diane Meuser, Ph. D. & Wayne Snyder, Ph. D.

Grader for Advanced Calculus (MA411), Boston University. Fall 2012
Reference: David Rohrlich, Ph.D.

SAT (General and Subject test) Mathematics Tutor at Boston University Center for English Language and Orientation Program (CELOP). Fall 2012
Reference: Nora Smith

PUBLICATIONS & PREPRINTS

4. Blanchard, P., Cuzzocreo, D., Devaney, R. L., Fitzgibbon, E., and Silvestri, S. A Dynamical Invariant for Sierpinski Cardioid Julia Sets. *Fundamenta Mathematicae*, **226** (2014), pp.253-277.
3. Fitzgibbon, E. and Silvestri S. Rational Maps: Julia Sets of Accessible Mandelbrot Sets are not Homeomorphic. To appear in *Topology Proceedings*.
2. Silvestri, S. Non Homeomorphic Julia Sets of Singularly Perturbed Rational Maps. *Pi Mu Epsilon Journal*, **13:10** (2014).
1. Bose, K., Cox, T., Silvestri S., and Varin, P. Invasion Front and Pattern Formation in a Model of Chemotaxis in One and Two Dimensions. *SIAM Undergraduate Research Online* **6** (2013).

TALKS

Conference Talks

- "Existence of homeomorphisms between Julia sets of singularly perturbed complex polynomials with attracting periodic cycles" *48th Spring Topology and Dynamics Conference* University of Richmond, March 2014.
- "Non Homeomorphic Julia Sets of Singularly Perturbed Rational Maps" *Symposium for Undergraduate in the Mathematical Sciences* (SUMS) Brown University, March 2013.

Seminar Talks

- "Fourier Transforms of Schwartz Functions" *Graduate Student Seminar* IUPUI, Spring 2016.
- "The Field of p-adic Numbers, $\mathbb{Q}_p$" *Graduate Student Seminar* IUPUI, Spring 2015.
- "Binomial Coefficients & Generating Functions" *Graduate Student Seminar* IUPUI, Fall 2014.

- "Hyperbolic Geometry in N-Dimensions" *Graduate Student Seminar* IUPUI, Fall 2013.

POSTERS "Rational Maps: Julia Sets of Accessible Mandelbrot Sets are not Homeomorphic", *Midwest Dynamical System Conference* University Illinois at Urbana-Champaign, November 2013.

EXTRA President of *AMS Chapter of IUPUI* Spring 2014 - Fall 2015

COMPUTER SKILLS *Languages & Software:* CSS, HTML5, LaTeX, Mathematica, basic knowledge of Java and Python

REFERENCES

Rodrigo Pérez, Ph.D.
IUPUI Associate Professor
(317) 278-6977
rperez@math.iupui.edu
402 N. Blackford, LD 268
Indianapolis IN 46202

Roland Roeder, Ph.D.
IUPUI Assistant Professor
(317) 274-6924
rroeder@math.iupui.edu
402 N. Blackford, LD 270
Indianapolis IN 46202

Robert L. Devaney, Ph.D.
Boston University Professor
(617) 353-4560
bob@bu.edu
111 Cummington Mall
Boston MA 02215

Emma Previato, Ph.D.
Boston University Professor
(617) 353-2997
ep@bu.edu
111 Cummington Mall
Boston MA 02215